

# Notice of Allowability

Application No.

09/943,811

Examiner

Juan A. Torres

Applicant(s)

LAROIA, RAJIV

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment - After Non-Final Rejection filed on 07/26/2007.
2. ☒ The allowed claim(s) is/are 1-6, 8-13, 15-20, 22-26, 28-39, 41-42, 44-45, 51-55, 57, and 61-96 (renumbered to 1-81).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

## **DETAILED ACTION**

### ***Allowable Subject Matter***

Claims 1-6, 8-13, 15-20, 22-26, 28-39, 41-42, 44-45, 51-55, 57, and 61-96 (renumbered to 1-81) are allowed.

The following is an examiner's statement of reasons for allowance: claims 1-6, 8-13, 15-20, 22-26, 28-39, 41-42, 44-45, 51-55, 57, and 61-96 (renumbered to 1-81) are allowed because the references cited fail to teach, as applicant has, generating a second prefix part from the included periodic signal representing the preceding symbol, generating in parallel, for each one of N tones, a separate periodic signal including at least one high order harmonic signal component that is different from the fundamental frequency signal component of the tone, where the generated periodic signal includes a square wave, and transmitting the generated N periodic signals into a communications channel, separately generating, for each one of N tones, a passband periodic signal representing a symbol, at least some of the N generated passband periodic signals include a high order harmonic signal component in addition to a fundamental frequency signal component, the high order harmonic signal component having a frequency which is higher than the frequency of the fundamental signal component, and transmitting the N generated passband periodic signals, rotating the constellation of symbols from which consecutive symbols are transmitted using one of the N tones by a fixed amount which is function of the duration of the multi-part prefix, N periodic signal generator circuits for generating periodic signals, each periodic signal corresponding to a different tone one of the N tones of the multi-tone signal, where the generated periodic signal includes a

Art Unit: 2611

square wave having a frequency component corresponding to one of the N tones of the multi-tone signal; and generating a multi-part prefix from a first periodic signal, the step of generating a multi-part prefix from the first periodic signal including: performing a cyclic extension operation on the first periodic signal to generate a cyclic prefix portion; processing the cyclic prefix portion to generate a continuity prefix portion from the cyclic prefix portion; and appending the cyclic prefix portion to the end of the continuity prefix portion and communicating a signal including the generated multi-part prefix to a transmitter, as the applicant has claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

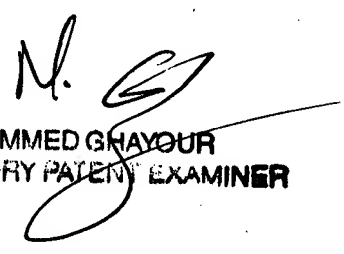
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan A. Torres whose telephone number is 571-272-3119. The examiner can normally be reached on 8-6 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2611

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Juan Alberto Torres  
07-30-2007

  
**MOHAMMED GHAYOUR**  
**SUPERVISORY PATENT EXAMINER**